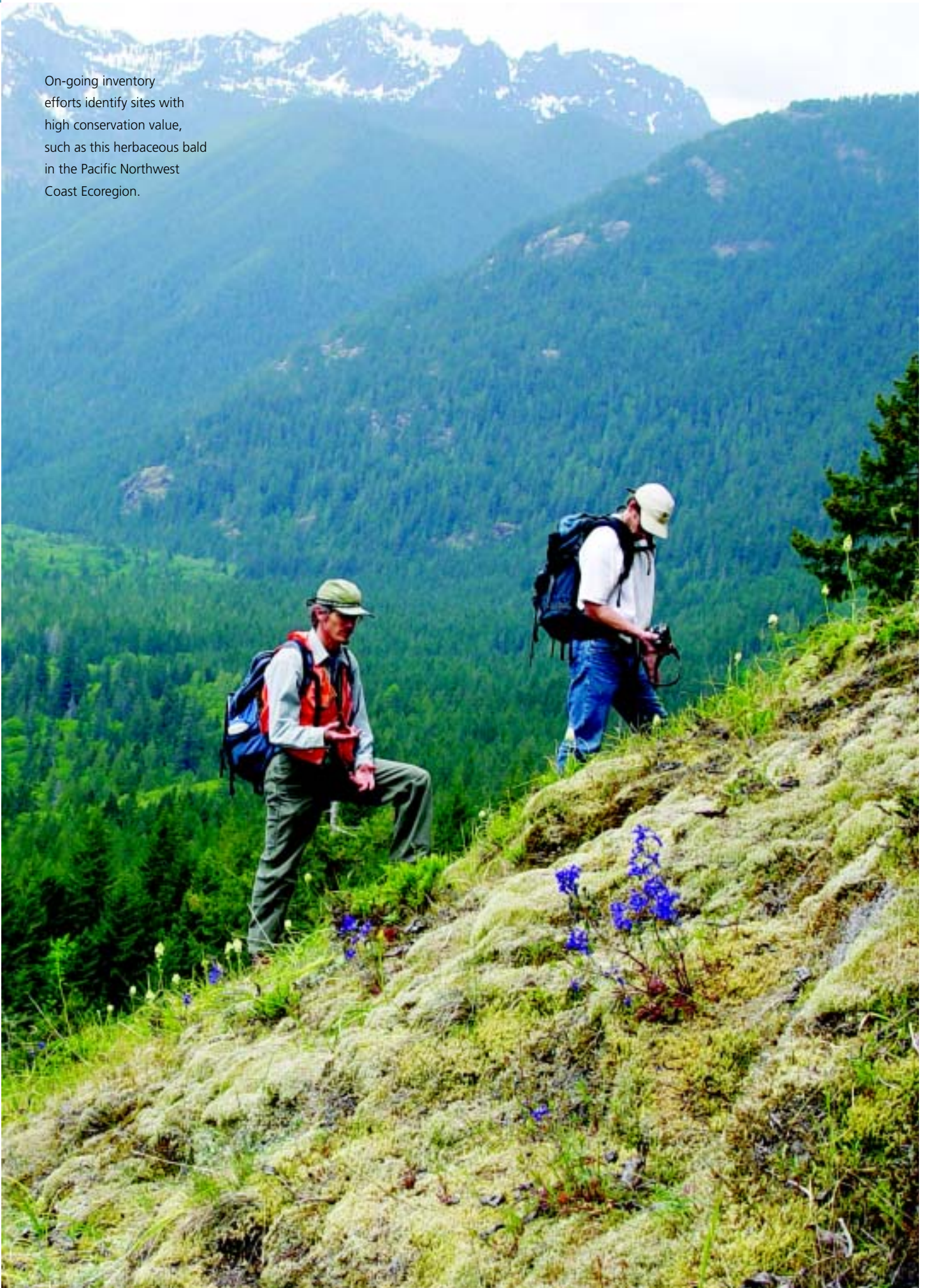


On-going inventory efforts identify sites with high conservation value, such as this herbaceous bald in the Pacific Northwest Coast Ecoregion.



## Natural Heritage Plan Implementation Priority Projects and Activities



# 2005-2007

The basic framework of Natural Heritage methodology will continue to be used for the 2005-2007 biennium to help identify project and activity priorities for the Natural Heritage and Natural Areas programs in Washington. These categories are:

- Inventory, classification, research and monitoring,
- Information products and services,
- Conservation planning and implementation

Natural Heritage Program staff have identified gaps in the information base, in the products and services that have been developed and provided to others, and in the level of protection provided for ecologically significant sites. These gaps form the basis of the project priorities listed here for the 2005-2007 biennium.

The priorities for management of the Department of Natural Resources' natural areas system have their foundation in the purposes of establishing natural areas: providing adequate protection for the significant ecological features present within them and providing appropriate scientific, educational and low-impact public use opportunities.

Following the statewide projects priorities table, priorities within each ecoregion are identified. The geographic distribution of priorities is essentially driven by the combination of two factors: the distribution, by ecoregion, of biological diversity, and the degree of threat, by ecoregion, posed to the biodiversity. Those ecoregions with high biodiversity and high threat tend to attract more attention and have a greater number of priority projects.



# Statewide

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Conduct inventory on highest priority ecosystems and species—see individual ecoregion priorities for more details	Core NHP function
Continue development and application of an ecological systems classification	Partners: NatureServe, federal agencies, TNC, WDFW and others
Coordinate forest vegetation classification efforts with those in British Columbia	Partners: NatureServe and B.C. Conservation Data Centre
Complete vegetation classification for Mt. Rainier, Olympic and North Cascades National Parks	Partnership with NPS and NatureServe
Develop a vegetation classification for herbaceous balds occurring in western Washington	NHP project
Incorporate Important Bird Areas data into the Natural Heritage Information System	Partnership with Audubon Society
Continue gathering information on non-vascular plant species, with goal of assigning a statewide status to those that are of conservation concern	Partners: federal agencies, NW Lichen Guild, and academia
Partner with Rare Care to continue monitoring rare plant populations on public lands	Partners: UW (Rare Care), State Parks, USFS, BLM
Pursue application of natural heritage methodology to aquatic features (both marine and freshwater)	Project with DNR Aquatics Division and others



The Natural Heritage and Natural Areas programs will continue to seek partnerships and recruit volunteers to assist in conservation efforts.



Additional work is needed to apply natural heritage methodology to the conservation of aquatic ecosystems, including marine systems.



## INFORMATION PRODUCTS AND SERVICES

Maintain and deliver current and comprehensive database on the high priority species and ecosystems of the state to broad array of information clients

## COMMENTS

Core function of NHP

Complete on-line amphibian and reptile atlas for Washington

Cost share project with BLM, WDFW and Colville National Forest

Complete on-line field guide to Washington's rare plants and reprint the hard copy edition

Partnership with BLM, USFS, NPS, USFWS, DNR, others

Complete vegetation classification and mapping for GAP Map Zone 1

Partnership with USGS

Develop informational materials on rare species and ecosystems for timber companies seeking Sustainable Forestry Initiative certification

Seek partnerships with industry

## CONSERVATION PLANNING AND IMPLEMENTATION

## COMMENTS

Pursue acquisition of lands within approved natural areas boundaries; currently more than 20 natural areas have approved additions

Existing and new funds from VWRP, TLT and federal grants

Review boundaries of existing natural areas for adequacy of protection for significant ecological features

On-going core function of NHP and NAP staff

Implement criteria and process for identification and designation of NRCAs

DNR and NHAC project

Implement revised public access policy for natural area preserves

DNR and NHAC project

Emphasize outreach to land trusts and non-governmental conservation groups to increase use of natural heritage data and expertise in conservation planning efforts

Give presentations, pursue partnerships, etc.

Work with WDFW in implementation of the Comprehensive Wildlife Conservation Strategy to achieve broader biodiversity conservation

DNR and WDFW project



Inventory efforts help identify conservation priorities. One priority is developing a strategy for several rare species that occur in small populations within the remnant prairies in southwestern Washington. Pictured here is the thin-leaved peavine (*Lathyrus holochlorus*).

Pacific Northwest Coast Ecoregion | 2005-2007 Priority Projects and Activities



The Pacific Northwest Coast Ecoregion has more priority elements than any other in Washington. This is in part due to the number of marine and estuarine elements. Priority activities for the 2005-2007 biennium include conservation planning for previously identified sites with high ecological value. For a description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Conduct inventories for <i>Sidalcea hendersonii</i> (Henderson's checkermallow)	Cost share with USFWS
CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Pursue conservation opportunities for sites identified as warranting natural areas status	Cooperative effort with other agencies and conservation organizations
Use ecoregional assessment to help identify potential additions to the natural areas system	Cooperative effort with other agencies and conservation organizations
Continue weed control efforts in the Chehalis River basin, including in the Chehalis River Surge Plain Natural Area Preserve	Multi-agency effort

ROB FIMBEL



Inventory and classification will help clarify the conservation needs of herbaceous balds.

## Puget Trough Ecoregion | 2005-2007 Priority Projects and Activities



This ecoregion continues to be a priority for the efforts of the Natural Heritage and Natural Areas Programs. The continued growth of the human population within the ecoregion and the accompanying rate at which lands are being converted to urban and suburban uses increases the risk to the remaining natural biological diversity. However, field surveys still result in significant sites being discovered. Known sites with high ecological value need conservation strategies and planning efforts. Protected natural areas have management needs (weed control, etc.). For a description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Complete rare plant inventory of historical prairie areas in southwest Washington	Cost share with USFWS
Complete inventory for <i>Sidalcea hendersonii</i> (Henderson's checkermallow) in Puget Trough area	Cooperative project with USFWS and CUH
Participate in plant community surveys on small islands in the San Juan Islands	Partners: State Parks, TNC, UW, USFWS, others
CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Complete a conservation strategy for rare species within the Boistfort Prairie area (Lewis County)	Partnership with USFWS, Columbia Land Trust, WDFW, NRCS
Continue conservation planning for <i>Lomatium bradshawii</i> (Bradshaw's lomatium) and other wet prairie species and features in Clark County	Partnership with USFWS, NRCS, Columbia Land Trust, Clark County, TNC
Complete management planning for Rocky Prairie and Mima Mounds NAPs	Natural Areas project
Complete five year review of <i>Castilleja levisecta</i> (golden paintbrush) recovery plan	Joint project: USFWS, DNR, others
Complete site selection process for <i>Castilleja levisecta</i> (golden paintbrush) reintroduction in southwestern Washington	Cost share project with USFWS



Additional inventory is needed in the San Juan Islands to assess conservation needs for species and ecosystems.

## North Cascades Ecoregion | 2005-2007 Priority Projects and Activities



The North Cascades Ecoregion has relatively few priority elements, particularly given that it encompasses approximately 10 percent of the state. It is also more ecologically intact than most of the other ecoregions in the state, in large part due to the rugged terrain and the fact that much of it is in public ownership, including lands that are in national park and wilderness area status. This combination of factors has resulted in relatively few projects having been identified for this ecoregion during the 2005-2007 biennium. For a description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Complete identification of priority places for conservation within the ecoregion	Partners: TNC, WDFW, DNR and counterparts in B.C.
Complete transfer of state trust lands to NRCAs in the Upper Sultan Basin	Potentially funded through TLT



Greider Ridge  
Natural Resources  
Conservation Area.



Mount Pilchuck  
Natural Resources  
Conservation  
Area.

West Cascades Ecoregion | 2005-2007 Priority Projects and Activities



The West Cascades Ecoregion has a relatively low number of priority elements, particularly given its size. Much of the ecoregion is in public ownership, including land that is in national park, national forest, national monument, or wilderness area status. However, there continues to be a need to conduct inventories for some elements, and additional conservation planning is needed for previously identified sites with high ecological value. For a description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Continue inventory of herbaceous balds	NHP project
CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Establish a new natural area within the Charley Creek drainage	Potentially funded by TLT
Continue pursuit of acquisition funds for West Tiger Mountain NRCA	Potentially funded by TLT



The Natural Heritage Plan establishes priorities for including ecosystems and species in the statewide natural areas system. Potential new natural areas are identified through on-going inventory efforts and conservation assessment work. Charley Creek, a potential new natural area, is an excellent example of a low elevation forest in the West Cascades.





## East Cascades Ecoregion | 2005-2007 Priority Projects and Activities



Priorities for this ecoregion for the 2005-2007 biennium are limited. Although the ecoregion is moderate in size and in relative number of priority elements, it is more intact ecologically than most other ecoregions. Much of the land is in public ownership, with only a small percentage of the ecoregion having been converted to other uses. For a more detailed description of this ecoregion, see the *2003 State of Washington Natural Heritage Plan*.

The priority projects that have been identified for this ecoregion all address extremely rare species (three plant species and one animal species). The three plant species are all endemic to very small portions of the ecoregion.

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Conduct research on the impact of seed weevils on <i>Sidalcea oregana</i> var. <i>calva</i> (Wenatchee Mountains checkermallow)	Cost share with USFWS
Continue research on site characteristics and requirements of <i>Hackelia venusta</i> (showy stickseed)	Cost share with USFWS, USFS
CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Pursue conservation opportunities for areas identified in the East Cascades ecoregional assessment	Cooperative effort of DNR, TNC, WDFW and others
Complete habitat enhancement for two rare plant species at Camas Meadows NAP: <i>Sidalcea oregana</i> var. <i>calva</i> (Wenatchee Mountains checkermallow) and <i>Delphinium viridescens</i> (Wenatchee larkspur)	Cost share with USFWS
Complete wetland restoration work at Trout Lake NAP, restoring seasonal flooding and increasing native plants and habitat for the Oregon Spotted Frog	Cooperative project with NRCS, DNR, and AmeriCorps volunteers
Complete <i>Hackelia venusta</i> (showy stickseed) recovery plan	Cost share with USFWS, USFS, and DNR
Develop and implement monitoring protocols for <i>Sidalcea oregana</i> var. <i>calva</i> (Wenatchee Mountains checkermallow)	Cooperative project with DNR and USFS

KRISTINA PROSZEK



The Natural Heritage and Natural Areas programs are partnering with others to conduct research, monitoring and habitat enhancement work on the Wenatchee Mountains checker-mallow (*Sidalcea oregana* var. *calva*).

## Okanogan Ecoregion | 2005-2007 Priority Projects and Activities

The Okanogan Ecoregion has a moderate number of priority elements given its relatively large size. A majority of the elements are Priority 3. Additionally, a significant portion of the ecoregion is in federal, state or tribal ownership and has not been converted to other uses to the degree that other ecoregions have. For a description of this ecoregion, see the *2003 State of Washington Natural Heritage Plan*.



### CONSERVATION PLANNING AND IMPLEMENTATION

### COMMENTS

Implement prescribed burning plan to reduce the amount of late-seral bitterbrush/bunchgrass within Davis Canyon NAP

Natural Areas project

Assist with development of management plan for *Spiranthes diluvialis* (Ute lady's-tresses)

Cooperative project with USFWS, Chelan PUD

Use ecoregional assessment to help identify potential additions to the natural areas system

Cooperative effort with WDFW, TNC, DNR and others

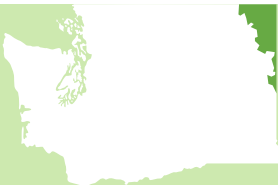


Additional conservation needs are identified through on-going inventory and assessment work.



Natural areas provide opportunities to conduct a wide variety of research projects. Davis Canyon is being used to study the use of prescribed fire as a tool to manage the vegetation in the absence of naturally occurring wildfires.

# Canadian Rockies Ecoregion | 2005-2007 Priority Projects and Activities



A number of factors contribute to the lack of specific priority projects for this ecoregion. First, the ecoregion has the second lowest total number of priority elements among the nine ecoregions in the state. This is due to the small area occupied by the ecoregion; only 4 percent of the area of the state. Also, the ecoregion is relatively intact ecologically due to its remoteness, its rugged nature, and the fact that it is largely in public ownership, primarily U.S. Forest Service. For a more detailed description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

CONSERVATION PLANNING AND IMPLEMENTATION	COMMENTS
Pursue opportunities to secure protection for important conservation sites identified in the Canadian Rockies ecoregional assessment	Cooperative effort with other agencies and conservation organizations



Protection of places with high conservation value will continue to be a priority for this ecoregion.



## Blue Mountains Ecoregion | 2005-2007 Priority Projects and Activities

The Blue Mountains Ecoregion has the fewest priority elements of Washington's nine ecoregions. This is due in large part to the small area involved; approximately 1 percent of Washington is in the Blue Mountains. In addition, the ecoregion is relatively intact, with only a small percentage having been converted to agricultural or urban development. As a result, fewer species and ecosystem types in this ecoregion have declined significantly from historical levels.

The relative lack of priority elements and the low degree of threat has resulted in a limited set of priorities for this ecoregion for the coming biennium. The priorities that do emerge for this ecoregion are associated with regional endemism: canyon grassland ecosystems and the rare species that are endemic to them. For a more detailed description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

### INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING

Inventory plant species endemic to canyon grassland ecosystems

### COMMENTS

Cost share with USFWS

### CONSERVATION PLANNING AND IMPLEMENTATION

Identify potential conservation areas, particularly in the Lime Hill area

### COMMENTS

Joint effort by BLM, DNR



Cooperative efforts by BLM and DNR provide critical information to support land management decisions for both agencies. The canyon grasslands in southeast Washington have yet to be fully explored for their botanical richness.





## Columbia Plateau Ecoregion | 2005-2007 Priority Projects and Activities

The Natural Heritage Program will focus considerable attention in the Columbia Plateau during the 2005-2007 biennium. The ecoregion is one of the top three in terms of the number of priority elements and perhaps overall the richest in terms of biological diversity. Additionally, more than 50 percent of the ecoregion has been converted, primarily for agricultural uses. The remaining, reasonably intact habitat is often fragmented. For a more detailed description of this ecoregion, see the 2003 *State of Washington Natural Heritage Plan*.

INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING	COMMENTS
Continued inventory of DNR-managed trust lands for special ecological features	NHP project
Design and implement field study to determine the distribution and habitat use of the striped whipsnake ( <i>Masticophis taeniatus</i> )	NHP project; potential partners include federal and state agencies
Complete two projects at Fairchild Air Force Base: Spalding's catchfly monitoring and vernal pool inventories	Funded by Fairchild AFB, US Army
Support research projects on NAPs and NRCAs: <ul style="list-style-type: none"><li>Study to determine relationship between soil silica phytoliths and existing vegetation (Marcellus Shrub-Steppe and Kahlotus Ridgetop NAPs)</li><li>Study of pollination ecology of basalt daisy (Selah Cliffs NAP)</li><li>Study of seed predation and cheatgrass competition effects on <i>Astragalus sinuatus</i> (Whited's milkvetch) at Upper Dry Gulch NAP</li></ul>	Research led by: <ul style="list-style-type: none"><li>St. Cloud University</li><li>CWU research project</li><li>UW</li></ul>
Monitor rare plant species at Columbia Hills and Upper Dry Gulch NAPs	Natural Areas project; volunteers
Monitor native grassland and invasive species at Columbia Hills and Kahlotus Ridgetop NAPs	Natural Areas project; volunteers
Monitor and conduct population viability analysis of <i>Eriogonum codium</i> (Umtanum wild buckwheat)	Cost share with USFWS, TNC
Monitor populations of <i>Artemisia campestris</i> var. <i>wormskioldii</i> (northern wormwood)	Cost share with USFWS, USFS, Institute for Applied Ecology



The Natural Heritage Program has been monitoring the occurrences of Spalding's catchfly (*Silene spaldingii*), a federally threatened species, at Fairchild Air Force Base for several years. The project provides the program with current information, which helps provide a solid

assessment of the conservation needs of the species. The project also provides Fairchild AFB with information necessary for the successful management of the species and its habitat.

Several inventory and/or monitoring projects, as well as conservation assessment and planning efforts are planned or underway. Most of these projects involve cost share agreements with various federal agencies.



#### INVENTORY, CLASSIFICATION, RESEARCH AND MONITORING (CONTINUED)

#### COMMENTS

Complete research on seed predation of <i>Astragalus sinuatus</i> (Whited's milkvetch) by weevils	Cooperative project with Center for Urban Horticulture, USFWS and BLM
Inventory for the potentially extinct <i>Corispermum pallidum</i> (pale bugseed)	Cooperative project with USFWS and BLM
Inventory for Palouse grassland endemic plant species	Cost share with USFWS

#### INFORMATION PRODUCTS AND SERVICES

#### COMMENTS

Complete vegetation map for the Umatilla National Wildlife Refuge	Project with Oregon NHP, USFWS
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#### CONSERVATION PLANNING AND IMPLEMENTATION

#### COMMENTS

Continue participation on the Pygmy Rabbit Recovery Team	Partners: USFWS, WDFW, BLM, TNC, Foster Creek Conservation District, DNR
Complete conservation needs assessment, including identification of potential sites for conservation action, for inland sand dune habitats	NHP project; potential partners include various federal and state agencies
Complete conservation assessment for Palouse endemic plant species	Cost share with USFWS



Most of the original Palouse grassland has been converted to agriculture, although pockets of native habitat containing endemic plant species still remain. Additional inventory work is needed to develop conservation strategies for these species and the grassland ecosystems.

## Acronyms

<b>BLM</b>	U.S.D.I. Bureau of Land Management
<b>CUH</b>	Center for Urban Horticulture (College of Forest Resources, U. of Washington)
<b>CWU</b>	Central Washington University
<b>DNR</b>	Washington State Department of Natural Resources
<b>DOE</b>	Washington State Department of Ecology
<b>NAP</b>	Natural Area Preserve
<b>NHAC</b>	Natural Heritage Advisory Council
<b>NHP</b>	Natural Heritage Program
<b>NPS</b>	National Park Service
<b>NRCA</b>	Natural Resources Conservation Area
<b>NRCS</b>	U.S. D.A. Natural Resource Conservation Service
<b>PUD</b>	Public Utility District
<b>SWIMTAC</b>	Salmon and Watershed Information Management Technical Advisory Committee
<b>TESC</b>	The Evergreen State College
<b>TLT</b>	Trust Land Transfer
<b>TNC</b>	The Nature Conservancy
<b>USFS</b>	U.S. Forest Service
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>USGS</b>	U.S. Geological Survey
<b>UW</b>	University of Washington
<b>WCC</b>	Washington Conservation Corps
<b>WDFW</b>	Washington Department of Fish and Wildlife
<b>WWRP</b>	Washington Wildlife and Recreation Program







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**Natural Resources**

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